


TREATING SOLUTION FOR SURFACE TREATMENT OF METAL
AND A METHOD FOR SURFACE TREATMENT

ABSTRACT



~~Treating~~A treating solution for the surface treatment of metal ~~to treat~~at least one metal material selected from the group consisting of a ferriferous material, a zinciferous material, an aluminiferous material and a magnesiferous material ~~or to treat two or more metal materials selected from the group consisting of ferriferous material, zinciferous material, aluminiferous material and magnesiferous material at the same time~~individually or collectively, wherein the aqueous surface treating solution contains from 5 to 5000 ppm of at least one compound selected from the group consisting of a zirconium compound and a titanium compound~~by~~, based on the metal element, and from 0.1 to 100 ppm of free fluorine ion and, further, the pH of the treating solution is from 2 to 6. To the treating solution, a calcium compound, magnesium compound, strontium compound, nitric acid group, oxygen acid and/or salt of oxygen acid, polymer compound and a surface-- active agent can be added.